



**Scope of delivery:**

- ✓ Electrical drive system
- ✓ Submersible motor 6000kW
- ✓ Transformer 4800 kVA
- ✓ Transformer 6000 kVA
- ✓ Main switchboard 690 V
- ✓ Inspection electrical installation
- ✓ Upgrade vessel management system
- ✓ Upgrade Scada system
- ✓ Renewing fire detection system
- ✓ Renewing cabling
- ✓ Installation suction pipe

## Van Oord

Volvox Terranova – trailing suction hopper dredger - 2016

While working on a project in Indonesia, trailing suction hopper dredger Volvox Terranova was heavily damaged by an old sea mine. Van Oord decided to repair and modernize their vessel at the same time. Bakker Sliedrecht was part of this great project and got the assignment to modify the suction tube configuration and restore the electrical installations.

### Modification of suction tube

To increase production, the configuration of the suction tube was changed. The two submersible motors in the suction tube were replaced by one motor that is more powerful. Also, two transformers were placed to work with the new submersible motor. In addition, a new electrical drive system was installed that powers both the jet pump as the dredging pump.

### Restoring the electrical system

As the blast wave of the sea mine was very powerful, damage was caused throughout the ship. Therefore, Bakker Sliedrecht inspected the entire electrical system from power generation to power distribution. All damaged components were repaired to restore this system. A whole new main switchboard was assembled in the workshop of Bakker Sliedrecht and installed on board the ship. The cable ducts and cabling were also renewed.

### Upgrade automation systems

The PLC Scada system was renewed to offer the dredging operators a clear visualization that allows them to monitor the dredging process efficiently. The existing BIMAC vessel management system was also upgraded with new software. Furthermore, I/O points were updated by removing old points and adding new ones.

### Agile project management

While working on this project, additional work was added to the project scope multiple times. All works were completed on time thanks to the great collaboration between Van Oord and Bakker Sliedrecht. The reinstatement of the TSHD Volvox Terranova was successfully completed in December 2016 well ahead of her first assignment.



**Do you have any questions?**

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